MATERJALIDE VASTUPIDAVUSE MÄÄRAMINE KEMIKAALIDE LÄBILASKVUSE SUHTES. OSA 2: LÄBILASKVUS PIDEVAS KOKKUPUUTES GAASILISE KEMIKAALIGA

Determination of material resistance to permeation by chemicals - Part 2: Permeation by potentially hazardous gaseous chemicals under conditions of continuous contact

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16523-2:2015+A1:2018 sisaldab Euroopa standardi EN 16523-2:2015+A1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 16523-2:2015+A1:2018 consists of the English text of the European standard EN 16523-2:2015+A1:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.12.2018.	Date of Availability of the European standard is 19.12.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Determination of material resistance to permeation by chemicals - Part 2: Permeation by potentially hazardous gaseous chemicals under conditions of continuous contact

Détermination de la résistance des matériaux à la perméation par des produits chimiques - Partie 2: Perméation par des produits chimiques gazeux potentiellement dangereux dans des conditions de contact continu

Bestimmung des Widerstands von Materialien gegen die Permeation von Chemikalien - Teil 2: Permeation durch potentiell gefährliche gasförmige Chemikalien unter Dauerkontakt

This European Standard was approved by CEN on 5 December 2014 and includes Amendment 1 approved by CEN on 7 May 2018.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN 16523-2:2015+A1:2018) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2019 and conflicting national standards shall be withdrawn at the latest by June 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

This document includes Amendment 1 approved by CEN on 7 May 2018.

〚A1〛 This document supersedes EN 16523-2:2015. 〚A1〛

〚A1〛 *Deleted text* 〚A1〛

EN 16523, *Determination of material resistance to permeation by chemicals*, is composed of the following parts:

— *Part 1: Permeation by liquid chemical under conditions of continuous contact*;

— *Part 2: Permeation by gaseous chemical under conditions of continuous contact* [the present document].

NOTE CEN/TC 162 WG 13 has foreseen to work on other test methods in the future that will spread in several standard parts:

— *Permeation by solid chemical under conditions of continuous contact;*

— *Permeation by chemical under conditions of intermittent contact;*

— *Permeation by chemical of seams, joins, assemblages and closers;*

— *Permeation by chemical in a form of droplets;*

— *Guide on testing and interpretation.*

The start and finish of text introduced or altered by amendment is indicated in the text by tags 〚A1〛 〚A1〛

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

[A1] *Deleted text* [A1]. A future part of EN 16523 will explain the use of the series of standards EN 16523.

This standard includes only the specific aspects linked with the testing with gaseous challenge chemicals.

1 Scope

This European Standard specifies a test method for the determination of the resistance of protective clothing, gloves and footwear materials to permeation by potentially hazardous gaseous chemicals under the condition of continuous contact.

This test method is applicable to the assessment of protection against gazeous chemicals that can be collected only by liquid or gaseous collecting media.

〚A1〛 This test method is not applicable for the assessment of gaseous chemical mixtures. 〚A1〛

This test method describes the modifications to EN 16523-1 necessary to test against gaseous chemicals that can be collected by liquid or gaseous collecting media.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16523-1:2015, *Determination of material resistance to permeation by chemicals - Part 1: Permeation by liquid chemical under conditions of continuous contact*

3 Terms and definitions

For the purposes of this document, the terms and definitions in EN 16523-1:2015 together with the following apply.

3.1
gaseous challenge chemical
chemical that is gaseous at the test conditions (atmospheric pressure and 23 °C) and that is used to challenge the PPE (protective clothing, gloves and footwear) material specimen

Note 1 to entry: Annex A lists the most common gaseous challenge chemicals. Other gases may be tested.

Note 2 to entry: The gas may be either pure or diluted in air or in nitrogen.

4 Test principle

The resistance of a PPE (protective clothing, gloves and footwear) material to permeation by a gaseous chemical is determined by measuring the normalized breakthrough time (NBT).

〚A1〛 This standard shall be read in conjunction with EN 16523-1. 〚A1〛

In the permeation test apparatus, the PPE (protective clothing, gloves and footwear) material separates the challenge chemical from the collecting medium. The collecting medium, which can be a gas or, a liquid, is analysed quantitatively for its concentration of the chemical and thereby the amount of that chemical that has permeated the barrier as a function of time after its initial contact with the PPE (protective clothing, gloves and footwear) material.